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ABSTRACT

Because drinking traditionally has been considered a behavior more appropriate for men than for women, heavy drinking by women frequently has been viewed in terms of deviation from traditional sex roles. This study was conducted to examine the relationships among overt behaviors, interests, and attitudes consistent with traditional sex roles and with patterns of alcohol use. Four hypotheses were tested: (1) that heavy drinking is associated with higher scores on measures consistent with more traditionally masculine behaviors and interests; (2) that light drinking is associated with higher scores on measures consistent with more traditionally feminine behaviors and interests; (3) that sex-role orientation may be a better predictor of drinking pattern than is biological gender; and (4) that the weight of a person may be a better predictor of the amount of drinking than the gender. Data were collected on 154 undergraduate students (68 men and 86 women) who completed the Demographic Questionnaire, the Drinking Habits Questionnaire, and the Sex-Role Behavior Scale-2. The results generally supported the four hypotheses. It appears that it is the sex-role orientation, rather than biological sex per se, that accounts most strongly for the differences in alcohol consumption. The fourth hypothesis concerning weight and alcohol consumption was partially supported. (Author/NB)

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Paper

RELATIONSHIP BETWEEN SEX-ROLE BEHAVIOR, BODY WEIGHT, AND ALCOHOL CONSUMPTION IN UNDERGRADUATE MEN AND WOMEN

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Abstract

Relationship Between Sex-Role Behavior, Body Weight, and Alcohol Consumption in Undergraduate Men and Women

Purpose:

The purpose of this research was to test four hypostheses: I. heavy drinking is associated with higher scores on measures consistent with more traditionally masculine behaviors and interests; 2. light drinking is associated with higher scores on measures consistent with more traditionally feminine behaviors and interests; 3. sex-role orientation may be a better predictor of drinking pattern than is male or female biological gender; and 4. weight of the person may be a better predictor of the amount of drinking than the gender.**Methodology:** The data were collected on 154 (68 men and 86 women) volunteers recruited from undergraduate psychology courses at North Carolina Agricultural & Technical State University , Greensboro, N.C. **Independent Variables** were gender, age, weight, and masculine and feminine orientations and level of consumption of different types of alcohol were used as **dependent variables. Instruments:** The data were collected by three questionnaires: **The demographic questionnaire**, **The Drinking Habits Questionnaire**,and **The Sex-Role Behavior Scale-2.** The datawere analyzed by using different tests of significance: **one-tailed t-tests, Multiple-regression analysis, and Correlation. Findings:** The results generally supported the four hypotheses specified in the introduction, that it is the sex-role orientation, rather than biological gender per se, that most strongly accounts for the differences in alcohol consumption. The fourth hypothesis concerning weight and alcohol consumption was partially supported.

Relationship Between Sex-Role Behavior, Body Weight, and Alcohol Consumption in Undergraduate Men and Women

Purpose:

Because drinking has traditionally been considered a behavior more appropriate for men than for women, heavy and problem drinking by women have frequently been viewed in terms of deviation from traditional feminine role or a sex role conflict. Thus, the purpose of this research was to examine the relationships among overt behaviors, interests and attitudes consistent with traditional sex roles and with patterns of alcohol use. These patterns of behaviors, interests and attitudes are here referred to as masculine or feminine role behaviors, sex-role behaviors or sex-role orientation and are used throughout this article in preference to more global terms such as masculinity and femininity (This research followed similar procedures in rationale and methodology used conducted by Sheryl Chomak and R. Lorraine collins in 1985 at State University of New York at Stony Brook).

To conduct the research, the following four hypostheses were tested: 1. Heavy drinking is associated with higher scores on measures consistent with more traditionally masculine behaviors and interests; 2. light drinking is associated with higher scores on measures consistent with more traditionally feminine behaviors and interests; 3. sex-role orientation may be a better predictor of drinking pattern than is male or female biological gender; and 4. weight of a person is a better predictor of the amount of drinking than the gender.

Methodology:

Collection of Data:

The data were collected on 154 (68 men and 86 women) volunteers recruited from undergraduate psychology courses at a historically Black University. The name of the university is-- North Carolina Agricultural & Technical State University , Greensboro, N.C., with the enrollment of 6,500. Of the subjects, 93% were Black, 6% white, and 1% were others. For academic classification, there were 21% freshmen, 37% sophomore, 27% juniors, and 15% seniors. Marital status included 97% singles, 2% married, and 1% others. The mean age of the subjects was 22.88 years.

Variables:

In the data analysis, gender, age, weight, and masculine and feminine orientations were used as independent variables, and level of consumption of different types of alcohol (wine, beer, distilled spirits and total alcohol consumption) were used as dependent variables.

Instruments:

The data were collected by three questionnaires:

The demographic questionnaire requested information about variables such as age, weight, marital status, and ethnic background.

The Drinking Habits Questionn (DHQ) (Cahalan et al., 1969 and used by Chomak and Collins, 1985) is a multiple-choice instrument wherein subjects are asked to provide information concerning their use of wine, beer, distilled spirits, and total liquor in terms of frequency and amount of consumption per drinking occasion and per month.

The Sex Role Behavior Scale-2 (SRBS-2, Orlofsky, 1981, and used by Chomak and Collins, 1985) consists of 143 items (original had 240) and was used to measure sex-role orientation. IT was chosen because it measures masculine and feminine sex roles as separate dimensions, anchors judgments of sex-role orientaion to specific behaviors and refers to negative as well as positive aspects of sex-typed behaviors. The subjects were asked to rate the items on SRBS-2 on a 5-point Likert-type scale. Subjects are assigned a score on each of four subscales. The male-valued (M) and female-valued (F) scales contain items judged to be desirable for both genders but more typical of either men or women, respectively. (For example of an item from M scale is 'going to sporting events'; an example of an item from the F scale is "going to art museums and galleries." Further, the sex-specific (mf) scales contains item more typical of and more desirable for one gender. Thus, mf-m scale contains items judged more deisrable for and more typical of men (playing ice hockey); the mf-f scale is scored for items judged to be more desirable for and typical of women (being a nurse or doing ironing). Two new variables --NewFem and NewMasc-- were derived from the SRBS-2 scales. NewFem is the sum of a subject's femininity (mf-f+F) scores and NewMasc is the sum of a subject's masculinity (mf-m+M) scores. (Behaviors that are expected and approved for a particular gender)

Analysis of the data:

A series of **one-tailed t-tests** was applied to report the significance of the gender differences in weight, drinking pattern of the three alcoholic beverages, and total alcohol consumption, and the gender differences on different sex-role orientation scales.

Multiple-regression analyses were used to examine interactions between biological gender and sex-role orientation.

Correlation procedure was used to examine relationship between biological gender and scores on NewMasc and NewFem scales and between M and mf-m scales and the F and mf-f scales.

Findings

Weight differential:

One-tailed t-test revealed that the mean weight for men (170.80 pounds) was significantly higher (t=5.70, df, 147, <.0001) than that of women (142.33 pounds).

Drinking habits:

Mean (+/- SD) on the DHQ for the sample are displayed in Table I. The comparision on drinking habits indicated that men differed

Table 1. Mean (+/- SD) and maximum of alcoholic beverages consumed per month

Group	Wine	Beer	Distilled spirits	Total alcohol
Women				
Mean	7.15	5.50	3.76	3.88
SD	5.38	3.21	2.71	3.66
Men				
Mean	7.07	9.64	4.27	7.29
SD	3.65	4.53	3.87	5.62
Combined				
Mean	7.11	7.52	4.01	5.59
SD	4.15	3.87	3.29	4.64

significantly in their total consumption and in their use of specific beverages. That is, men reported drinking almost twice as much total alcohol and beer per month as did women (total consumption--t=2.97, df 70, p <.002; beer--t=3.85, df 61,p <.0002). However, men and women did not differ significantly in their consumption of wine and distilled spirit.

Sex-role Orientation:

Four sub-scales were identified on the SRBS-2-- stereotypic femininity (mf-f), 'valued' femininity (F), stereotypic masculinity (mf-m) and 'valued' masculinity (M).

Mean (+/-SD), minimum and maximum scores on the SRBS-2 scales are listed in Table 2.

Table 2: Mean (+/- SD), Minimum and Maximum Scores on SRBS-2/Derived Scales

	SRBS-2 scales				Derived Scales	
Group	F	M	mf-f	mf-m	NewFem	NewMas
Women						
Mean	84.62	66.27	30.11	26.88	114.34	92.97
SD	13.16	16.71	9.27	11.02	20.52	24.06
Min	50	29	7	1	68	37
Max	105	100	53	58	156	148
Men						
Mean	74.26	84.97	18.16	50.97	91.98	136.38
SD	16.48	18.85	10.76	15.58	24.87	29.34
Min	41	27	2	22	44	86
Max	112	125	50	90	157	215
Combined						
Mean	79.45	75.67	24.14	38.93	103.16	114.67
SD	14.57	17.58	10.03	13.3	22.69	26.7
Min	41	27	2	1	44	37
Max	112	125	53	90	157	215

A series of one-tailed t-tests revealed that men and women differed significantly on each of the four scales: mf-f (t=4.47, df 146, p <.0001), mf-m (t=8.35, df 138, p <.0001), F (t=3.57, df 135, p<.0001), and M (t=6.15, df 134, p<.0001).

Further, for the total sample, there were positive correlations between both the M and Mf-m scales(r=.66, df 58, p<.0001) and the F and mf-f scales(r=.71, df 78, p <.0001).

Also, one-tailed t-tests confirmed that the differences between the means for men and women were significant for each of the two new variables: NewFem (t=5.90, df 138, p <.0001), and NewMasc: (t=2.23, df 127, p <.012).

Sex-roles and Drinking Patterns:

Association between sex-role and drinking patterns were analyzed in accordance with models explicated by Taylor and Hall (1982), spence (1983), and spence et al. (1979) and used by Chomak and collins (1985). Within these models, masculinity and femininity are seen as orthogonal variables with the potential of having separate main effects on the dependent variable of interest. Such a formulation allows for the use of either analysis of variance or regression techniques. In the present sutdy, a regression analysis was used because this approach was judged to reflect the continuous nature of sex-role orientation scores (Spence et al., l979). Thus, interactions between sex-role orientation and drinking patterns were analyzed by multiple regression analyses sepearately for men and women. Four independent variables were used for each gender: weight, age, NewMasc, and NewFem. Four separate regression equations were generated for each gender with consumption of beer, wine, distilled spirits or total consumption being regressed on the four above listed independent variables. The results of these analyses are summarized in Tables 3 and 4.

For women, when total consumption was regressed on the four independent variables, NewFem and NewMasc were the only two variables that achieved a significant F value, i, e., NewMasc positively and NewFem negatively correlated with total consumption. Weight and age positively and NewMac negatively correlated to wine consumption. And for beer, NewFem negatively correlated to beer as well as to distilled spirits consumption.

Table 3. Regression of alcohol consumption on NewFew, NewMasc, Age, and Weight for Women

	R	R2	Beta	F
Total alcohol consumption				
NewMasc	.56	.31	.87	22.31***
NewFem	.30	.09	-.38	10.77**
Age	.10	.01	-.12	.38
Weight	.32	.10	.08	.11
Wine Consumption				
Weight	.69	.48	.51	15.69***
NewMasc	.16	.37	-.05	12.89**
Age	.46	.21	.19	5.47*
NewFem	.14	.02	.15	1.33
Beer Consumption				
NewFem	.28	.08	-.68	7.44**
Age	.17	.03	.12	.62
NewMasc	.28	.08	-.01	.00
Weight	.03	.001	-.01	.00
Distilled Spirits Consumption				
NewFem	.00	.00	-.80	7.51**
NewMasc	.17	.03	.09	.14
Age	.03	.001	.02	.02
Weight	.14	.02	-.01	.00

***p < .05 , **p < .01, ***p < .001**

For men, age and NewMasc achieved significant F value for total alcohol consumption, i. e., NewMac and age positively correlated with total consumption. For wine and beer both, NewMasc, weight, and age positively and NewFem negatively correlated, respectively. Interestingly, distilled spirits consumption did not achieve significant F value for any of the four independent variables.(for women, NewFem did negatively).

Table 4. Regression of Alcohol Consumption on NewFem, NewMasc, and Weight for Men

	R	R2	Beta	F
Total alcohol consumption				
NewMasc	.41	.17	.34	4.44*
NewFem	.24	.06	-.03	.04
Age	.35	.12	.37	3.86*
Weight	.14	.02	.11	.07
Wine Consumption				
NewFem	.17	.03	-.40	6.78**
NewMasc	.2	.04	.34	4.73*
Weight	.26	.07	.33	4.47*
Age	.04	.002	.16	.74
Beer Consumption				
NewMasc	.22	.05	.39	7.13**
NewFem	.1	.01	-.49	6.66**
Age	.26	.07	.37	4.07*
Weight	.1	.01	-.07	.19
Distilled Spirits Consumption				
Age	.1	.01	.01	.13
NewMasc	.03	.001	.16	.04
NewFem	.1	.01	-.11	.13
Weight	.17	.03	.28	.54

* p < .05 **p <.01

Discussion

The findings on drinking habits indicated that men reported drinking almost twice as much alcohol per month as did women. However, the similarity in number of men and women who ever drink alcohol supports the earlier findings (Wechsler et. al, 1976; Chomack and Collins, 1985). Except in consumption of beer (men consuming twice as much beer as women), they did not differ significantly in their consumption of wine and distilled spirits in monthly consumption. This finding is inconsistent with

the earlier findings (Wechsler et. al, 1976; Chomack and Collins, 1985).

The pattern of results from the regression analyses provides support for the hypothesis that it is the sex-role orientation, rather than biological gender per se, that most strongly accounts for the differences in alcohol consumption. Only in the case of beer consumption did biological gender account for more of the variance than did degree of masculine and feminine orientation.

The results generally support the first three hypotheses specified in the introduction. As predicted, higher masculine sex-role behavior scores were associated with heavier alcohol consumption, but for men only. Sex-role variables were generally found to account for more of the variance in alcohol consumption than biological gender. That is, higher levels of masculine sex role were associated with greater alcohol consumption by men. For women, masculine orientation did not have a significant effect on drinking.

The results of the multiple regression support the hypothesis that alcohol use is negatively correlated with feminine sex-role behavior scores for both men and women. For women, feminine sex-role was the only variable significantly associated with lowered alcohol consumption. This pattern of results is consistent with findings seen as indicating that acceptance or rejection of the feminine sex role is more important than level of masculine role in predicting alcohol consumption by women (Wilsnack and Wilsnack, 1978; Chomak and Collins, 1985).

Except for wine, weight did not have a bearing on the consumption of beer or distilled spirits among men. That is, there is positive correlation between weight and consumption of wine among men. However, this find does not support the earlier research findings (Chomak and Collins, 1985). The possible explanation could be that men as a group weigh more than women, and because dose-related alcohol effects are less for drinkers whose weight is higher. Men have to drink more wine in order to get adequate level of intoxication effect. For women, weight had no bearing on the consumption of any type of alcoholic beverages.

The findings of the present study point to a very interesting observation along racial dimensions. The majority of the subjects in this research were black. In comparison to research studies basically on white undergraduate students (Chomak and Collins, 1985; Pedley, Williams, and Smith, 1990), except in the similar amoung of consumption of wine (, black undergraduate students seem to consume, on an average, much less alcohol beverages. One possible explaination could be that probably the times are different. There is more and more emphasis on less alcohol consumption

within last six to seven years. The findings of this study shed some light contradicting the societal stereotype of Black people's tendency to consume more drug and alcohol. Hence, further research in this area is needed to substantiate the present findings.